FIG. 1

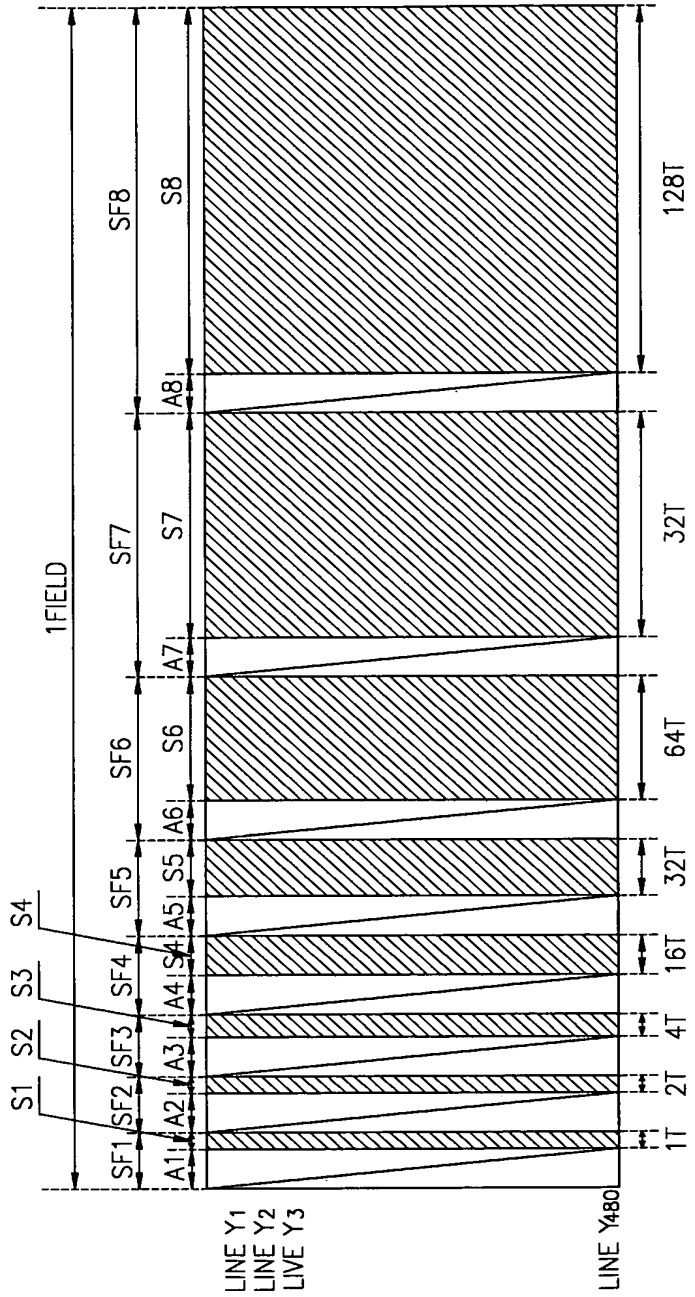
1FIELD
SF1
SF2
SF3
SF4
SF5
SF6
SF7
SF8
S1
S2
S3
S4
S5
S6
S7
S8
A1
A2
A3
A4
A5
A6
A7
A8
1T
2T
4T
16T
32T
64T
32T
128T
LINE Y1
LINE Y2
LIVE Y3
LINE Y480

FIG. 2A

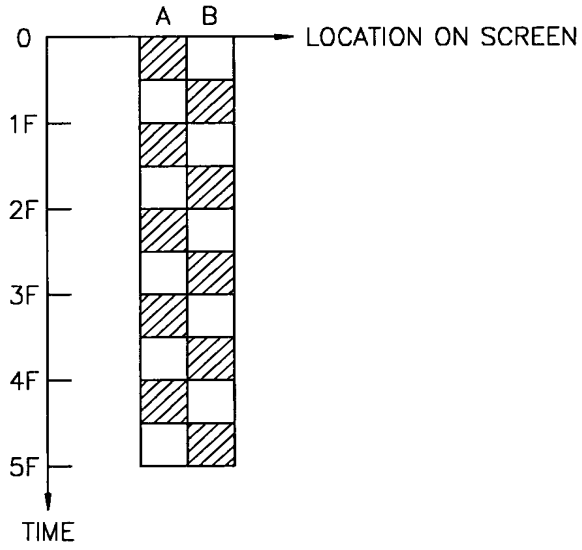
A
B
0
LOCATION ON SCREEN
1F
2F
3F
4F
5F
TIME

FIG. 2B

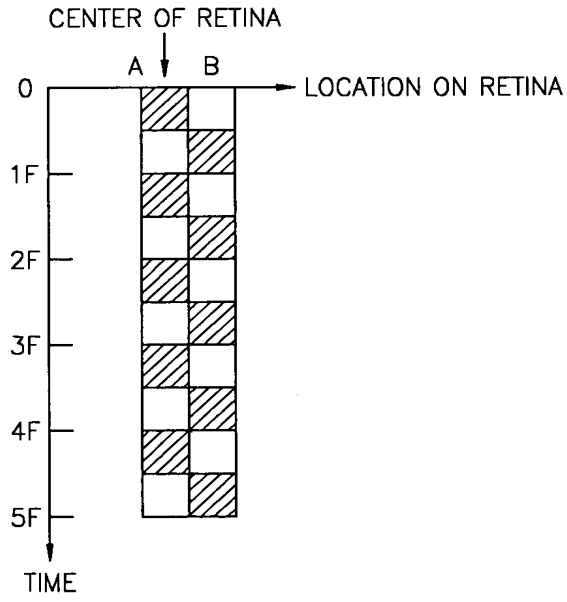
CENTER OF RETINA
A
B
0
LOCATION ON RETINA
1F
2F
3F
4F
5F
TIME

FIG. 2C

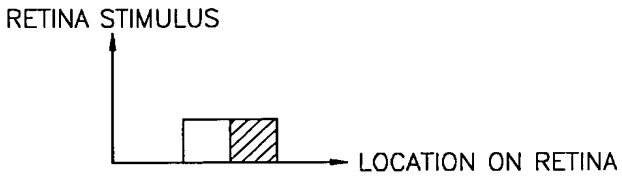
RETINA STIMULUS
LOCATION ON RETINA

FIG. 3

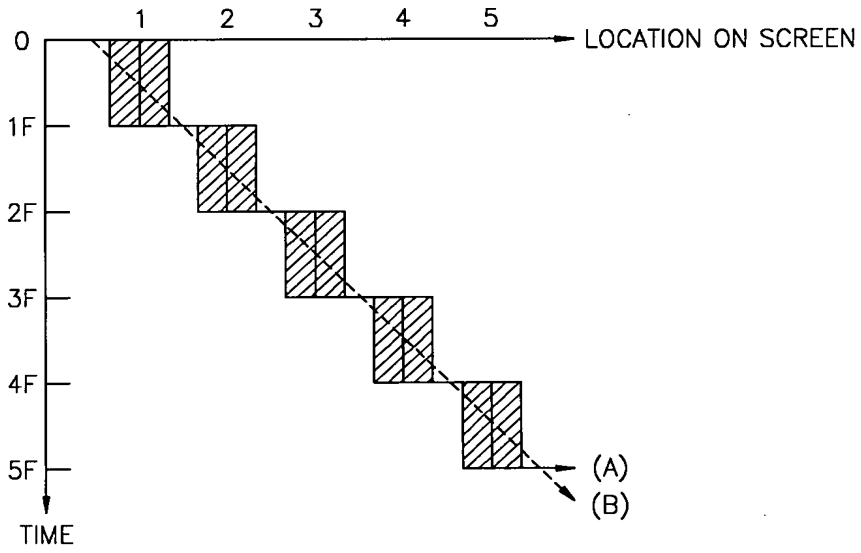
1
2
3
4
5
LOCATION ON SCREEN
0
1F
2F
3F
4F
5F
TIME
(A)
(B)

FIG. 4A

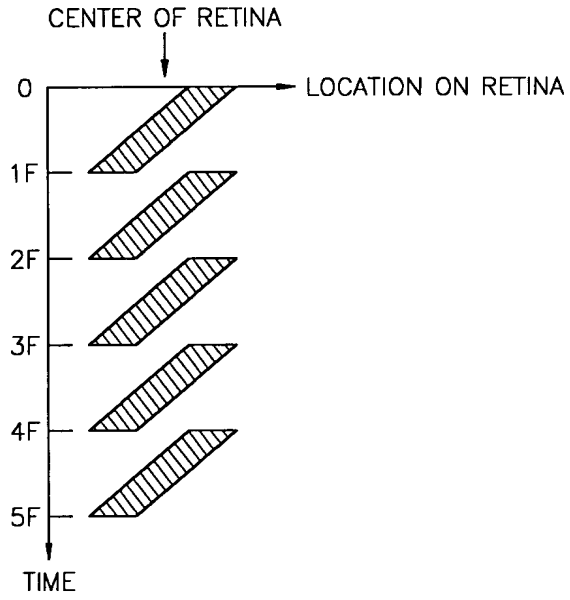
CENTER OF RETINA
0
LOCATION ON RETINA
1F
2F
3F
4F
5F
TIME

FIG. 4B

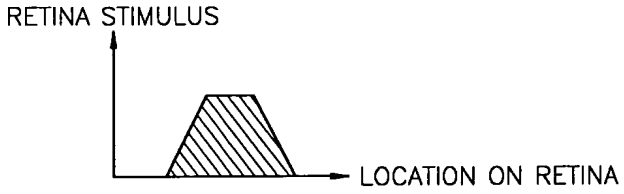
RETINA STIMULUS
LOCATION ON RETINA

FIG. 5

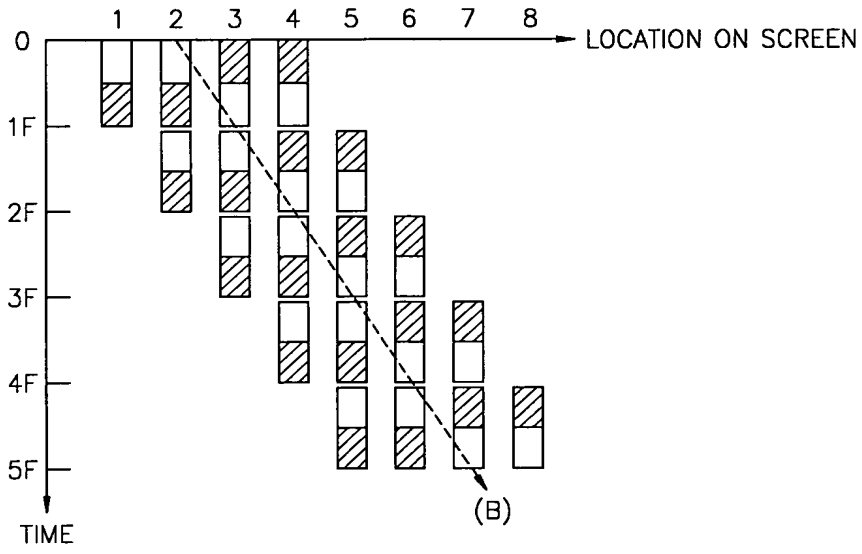

FIG. 6A

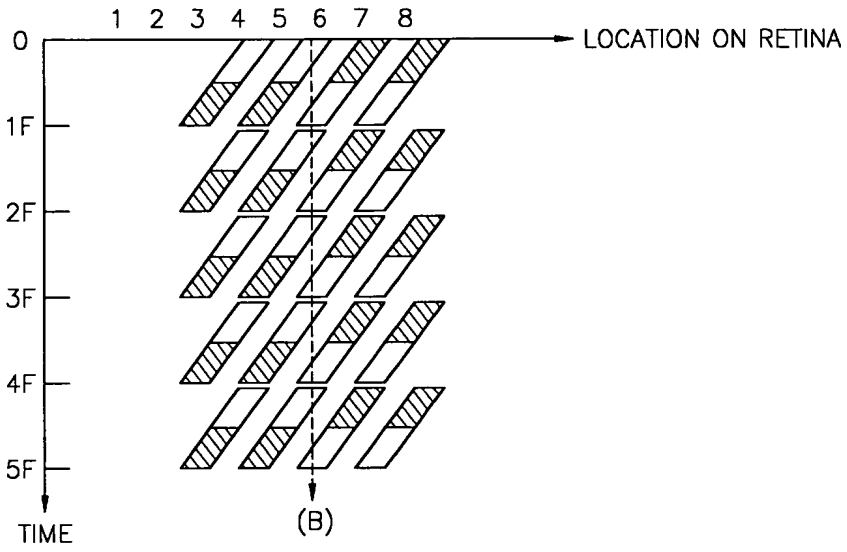
1 2 3 4 5 6 7 8
LOCATION ON RETINA
0
1F
2F
3F
4F
5F
TIME
(B)

FIG. 6B

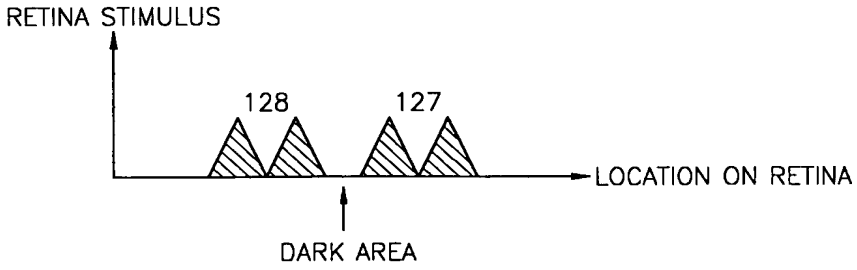
RETINA STIMULUS
128
127
LOCATION ON RETINA
DARK AREA

FIG. 7

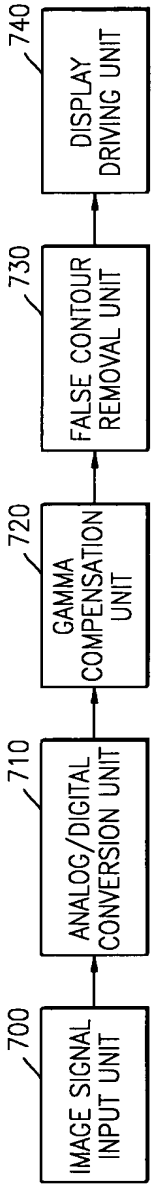
700
IMAGE SIGNAL INPUT UNIT
710
ANALOG/DIGITAL CONVERSION UNIT
720
GAMMA COMPENSATION UNIT
730
FALSE CONTOUR REMOVAL UNIT
740
DISPLAY DRIVING UNIT

FIG. 8

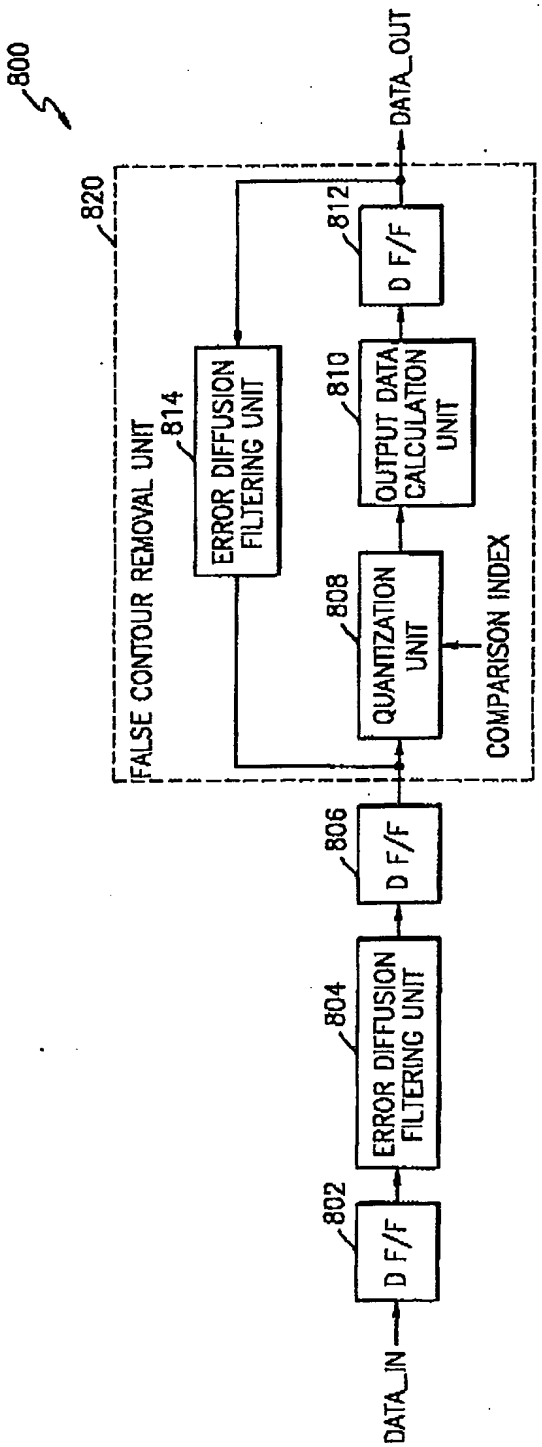
800
DATA_OUT
820
812
D F/F
FALSE CONTOUR REMOVAL UNIT
814
ERROR DIFFUSION FILTERING UNIT
810
OUTPUT DATA CALCULATION UNIT
808
QUANTIZATION UNIT
COMPARISON INDEX
806
D F/F
804
ERROR DIFFUSION FILTERING UNIT
802
D F/F
DATA_IN

FIG. 9A

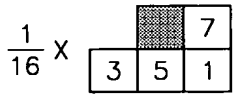

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FIG. 9B

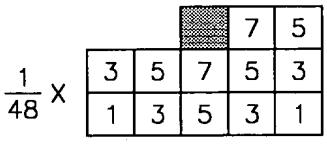

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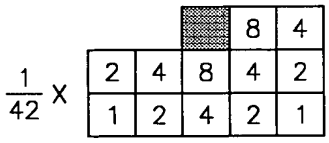
FIG. 9C



STUCKI

FIG. 10

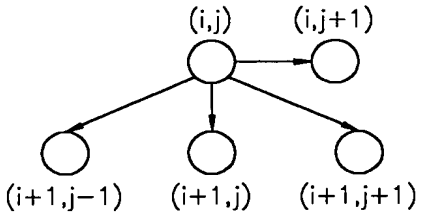


FIG. 11

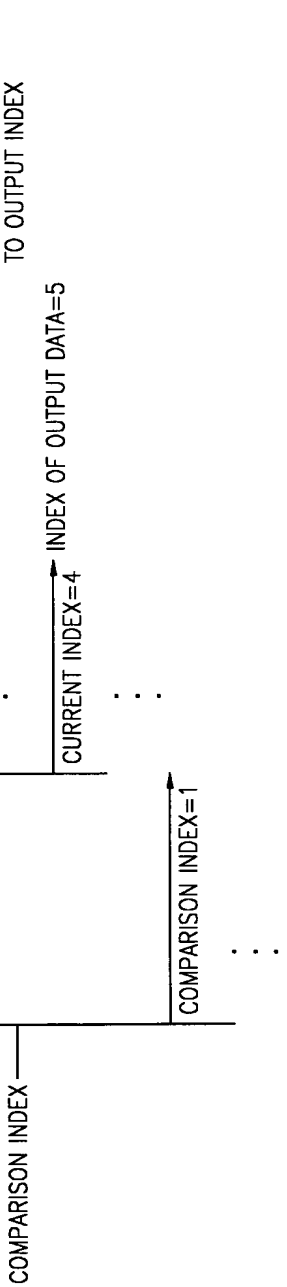

COMPARISON INDEX
COMPARISON INDEX=0
COMPARISON INDEX=1
CURRENT INDEX=0
CURRENT INDEX=1
CURRENT INDEX=4
INDEX OF OUTPUT DATA=0
INDEX OF OUTPUT DATA=0
INDEX OF OUTPUT DATA=5
CALCULATION OF OUTPUT DATA CORRESPONDING TO OUTPUT INDEX

FIG. 12

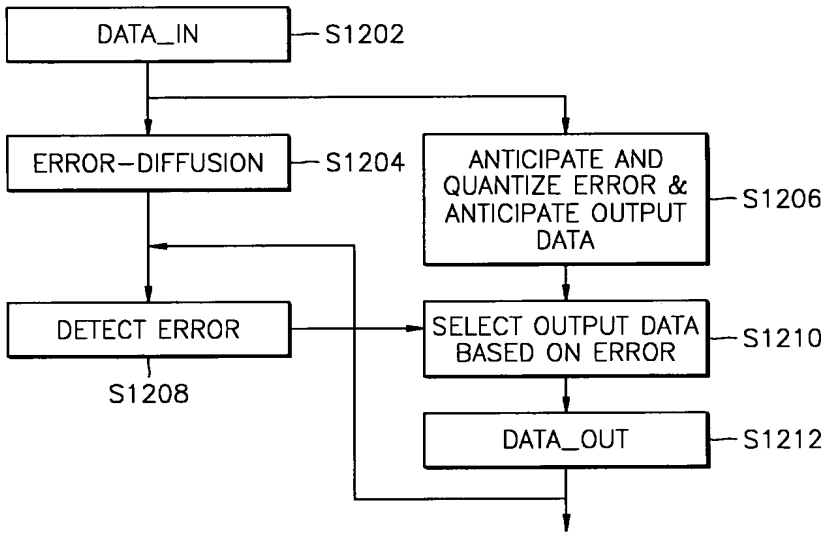

DATA_IN
S1202
ERROR-DIFFUSION
S1204
ANTICIPATE AND QUANTIZE ERROR & ANTICIPATE OUTPUT DATA
S1206
DETECT ERROR
S1208
SELECT OUTPUT DATA BASED ON ERROR
S1210
DATA_OUT
S1212

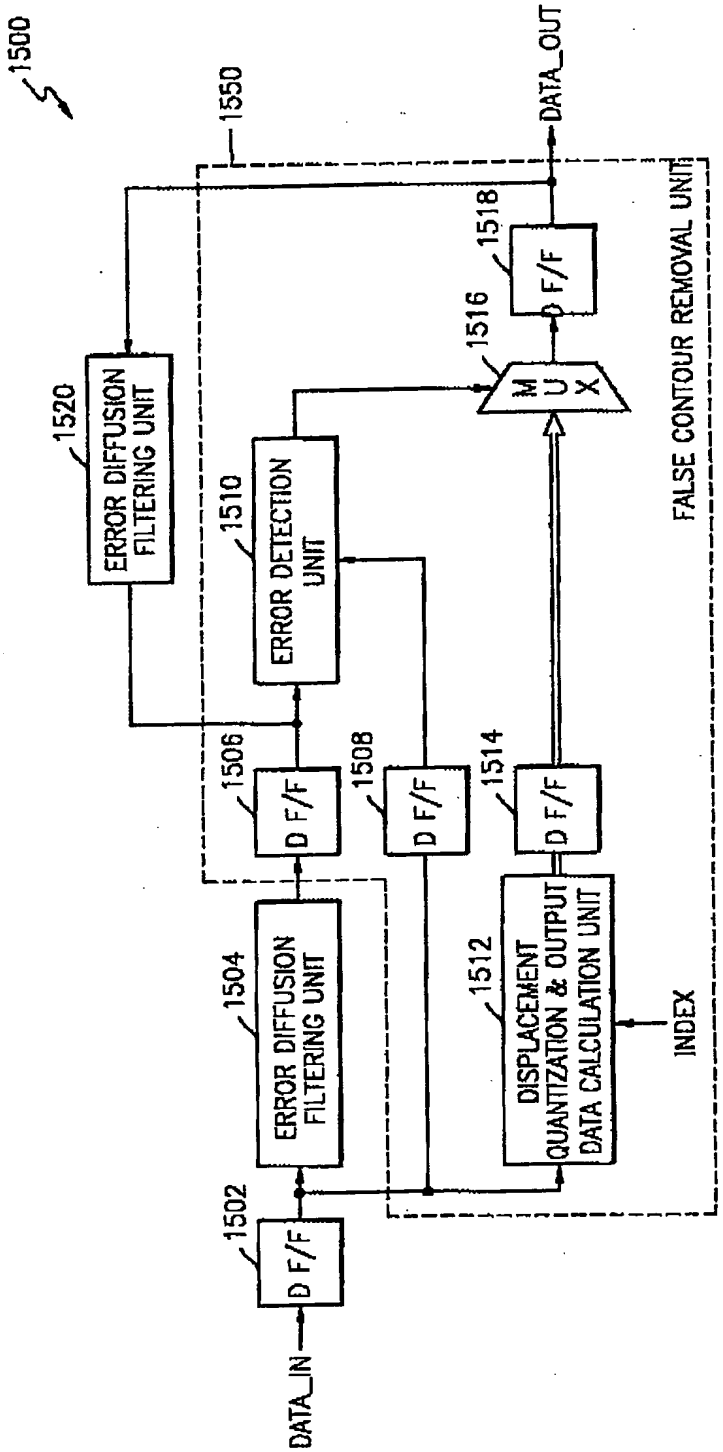
FIG. 13

GRAY SCALE VALUES	INDEX NO.	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9
0~D3X1−1	0	BINARY			X	X	X	X	X	X	X
D3X1~D3X2−1	1				●	X	X	X	X	X	X
D3X2~D3X3−1	2				X	●	X	X	X	X	X
D3X3~D3X4−1	3				●	●	X	X	X	X	X
D3X4~D3X5−1	4				●	X	●	X	X	X	X
D3X5~D3X6−1	5				X	●	●	X	X	X	X
D3X6~D3X7−1	6				●	●	●	X	X	X	X
D3X7~D3X8−1	7				●	●	X	●	X	X	X
D3X8~D3X9−1	8				●	X	●	●	X	X	X
D3X9~D3X10−1	9				X	●	●	●	X	X	X
D3X10~D3X11−1	10				●	●	●	●	X	X	X
D3X11~D3X12−1	11				●	●	●	X	●	X	X
D3X12~D3X13−1	12				●	●	X	●	●	X	X
D3X13~D3X14−1	13				●	X	●	●	●	X	X
D3X14~D3X15−1	14				X	●	●	●	●	X	X
D3X15~D3X16−1	15				●	●	●	●	●	X	X
D3X16~D3X17−1	16				●	●	●	X	●	●	X
D3X17~D3X18−1	17				●	●	X	●	●	●	X
D3X18~D3X19−1	18				●	X	●	●	●	●	X
D3X19~D3X20−1	19				X	●	●	●	●	●	X
D3X20~D3X21−1	20				●	●	●	●	●	●	X
D3X21~D3X22−1	21				●	●	●	X	●	●	
D3X22~D3X23−1	22				●	●	X	●	●	●	
D3X23~D3X24−1	23				●	X	●	●	●	●	
D3X24~D3X25−1	24				X	●	●	●	●	●	
D3X25~D3X26−1	25				●	●	●	●	●	●	

FIG. 14

CURRENT INDEX/INDEX ERROR	0	1	2	−1	−2
INDEX 14(GROUP 2)	2	2	2	2	2
INDEX 15(GROUP 1)	1	1	1	1	1
INDEX 16(GROUP 5)	5	5	5	5	5
INDEX 17(GROUP 4)	4	4	4	4	4
INDEX 18(GROUP 3)	3	3	3	3	3
INDEX 19(GROUP 2)	2	2	2	2	2
INDEX 20(GROUP 1)	1	1	1	1	1
INDEX 21(GROUP 5)	5	5	5	5	5
INDEX 22(GROUP 4)	4	4	4	4	4

FIG. 15


1500
1550
DATA_OUT
FALSE CONTOUR REMOVAL UNIT
1518
D F/F
1516
MUX
1520
ERROR DIFFUSION FILTERING UNIT
1510
ERROR DETECTION UNIT
1506
D F/F
1508
D F/F
1514
D F/F
1504
ERROR DIFFUSION FILTERING UNIT
1512
DISPLACEMENT QUANTIZATION & OUTPUT DATA CALCULATION UNIT
INDEX
1502
D F/F
DATA_IN